REMARKS

A replacement Figure 2b is being submitted to correct the typographical error noted by the Examiner.

Claims 1-6, 9 and 11 and have been amended to define clearly the Applicant's invention. New claims 12-20 have been added to define further aspects of the Applicant's invention. Claims 1-20 are now pending in the present application and are believed to distinguish patentably over the prior art.

In the Official Action, the Examiner has rejected claims 1-11 under 35 U.S.C. §103(a) as being unpatentable over International PCT Application No. WO 95/14971 to Desnoyers et al. ("Desnoyers") in view of European Patent Application No. 0851624 to Uota et al. ("Uota"). The Examiner is alleging that the Applicant's invention as defined by these claims would be obvious to one of ordinary skill in the art in view of the combined teachings of these references. Applicant respectfully submits that the Examiner's rejection in view of the cited references is inappropriate for the reasons set forth below.

According to one aspect of the Applicant's invention as defined by independent claim 1, Applicant provides a method for transmitting encoded data between synchronized sending and receiving digital systems across a lossy transmission media. The sending and receiving digital systems maintain respective encoder and decoder information records. During the method, packet data to be transmitted by the sending digital system is encoded using encoding information in an encoder information record that has been previously acknowledged by the receiving digital system. A new encoder information record including the encoding information used to encode the packet data as well as the packet data is built. The encoded packet data is transmitted to the receiving digital system as a packet including a header having a packet number and a tag identifying the encoding information used to encode the packet data. When the packet is received by the receiving digital system, the header is examined to determine the encoding information used to encode the packet data. The packet is decoded using corresponding decoder information in the decoder information record and the decoder information in the decoder information record is updated with the packet data. Processing of the packet is acknowledged to the sending digital system to enable the sending digital system to update the encoder information so that the new encoder information record is used to encode future packet data to be transmitted. When a packet is lost, the sending digital system rebuilds the new encoder information record without the lost packet data.

In contrast, Desnoyers discloses a method and system for synchronizing an encoder and a decoder for data utilizing sequence indicators and error detection information added to the data before transmission. During the method, error detection information, based on a current unit of encoded data and at least one previous unit of encoded data, is added to the encoded data to provide error detect units. The error detect units are transmitted across the communication network. When the error detect units are received, errors are detected utilizing the error detection information therein. In order to synchronize the encoder and decoder, upon detecting an error by the decoder, the decoder transmits a reset request code sequence over a reverse channel to the encoder. In the preferred embodiment, the encoder in turn transmits an acknowledgement code sequence over the communication network to acknowledge receipt of the reset request code sequence. When the acknowledgement code sequence is received, the decoder is reset. Where there is a failure of the acknowledgement code sequence, the decoder transmits a further reset request code sequence to the encoder.

Uota discloses a method of constructing data frames to enable sending and receiving systems to determine when a transmitted data frame has not been properly received. Each data frame includes a flag sequence field, a forward information field, a backward information field, a user data field and an error-detection code field. The flag sequence field delineates the frame, the forward information field identifies the frame being sent and the backward information field includes history information of received frames in the form of an 8-bit string. When a frame is received, a bit in the bit string of the backward information field of a return frame to be transmitted is inverted. This enables the digital system receiving the return frame to determine that the previously transmitted frame was properly received.

Applicant respectfully submits that neither Desnoyers nor Uoto either alone or in combination teaches or suggests the Applicant's invention as claimed. The Examiner alleges Desnoyers teaches that when a packet is lost, a newly created encoder information record is rebuilt without the lost packet data. Reference to page 5, line 32 to page 6, line 10 of Desnoyers is made to provide support for this allegation. This section of the Desnoyers reference discloses synchronization of the encoder and decoder and teaches resetting of the decoder in response to an acknowledgement code sequence received from the encoder that is generated when the decoder transmits a reset request code sequence. There is no discussion in Desnoyers of rebuilding a new information record at the sending digital system that is used to encode future packet data to be transmitted without the previously transmitted packet data when the receiving digital system fails to receive a transmitted packet.

The Examiner alleges that Uoto teaches the building of a new information record including the encoding information used to encode the packet data as well as the packet data. Applicant respectfully submits that Uoto fails to teach or suggest the building or rebuilding of such an information record used to encode packet data. Uoto simply discloses the construction of data frames that can be examined to determine if previously transmitted frames were received by adjusting bits in the bit strings of backward information fields within return data frames.

Accordingly, Applicant respectfully submits that neither Desnoyers nor Uoto either alone or in combination teaches or suggests the encoding of packet data using encoding information in an encoder information record that has been verified as received, the creation of a new encoder information record to be used to encode future packet data that includes the encoding information used to encode the transmitted data packet as well as the transmitted packet data and rebuilding the new encoder information record without the transmitted packet data when receipt of the transmitted data packet is not confirmed. Accordingly, Applicant respectfully submits that independent claim 1 distinguishes patentably over the cited references and should be allowed. Since claims 2-16 are dependent either directly or indirectly on independent claim 1, Applicant respectfully submits that these claims should also be allowed.

New independent claim 17 defines a communication system and is similar in scope to independent claim 1. Accordingly, Applicant respectfully submits that this claim distinguishes patentably over the cited references for the same reasons set forth above and should be allowed. Since claims 18-20 are dependent either directly or indirectly on independent claim 17, Applicant respectfully submits that these claims should also be allowed.

In view of the above, it is believed the application is in order for allowance and action to that end is respectfully requested.

SUMMARY

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Applicant hereby petitions for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in

connection with the filing of this Amendment is to be charged to Deposit Account No. 50-0388 (Order No. SMC1P008).

Respectfully submitted,

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